

WHAT IS CLAIMED IS:

1. A deep rolling tool apparatus comprising:
a housing having at least one recessed region defining a seat;
a tool positionable in said seat;
a detent arranged in said housing adapted to engage with said tool, said detent comprising
a locking member movable between a retracted position and an extended position at
which said member extends into said seat;
wherein a positioning of the tool in the seat engages the locking
member with the tool, removably securing the same in the housing.
2. The apparatus of claim 1 comprising a biasing member for biasing said
locking member toward an extended position.
3. The apparatus of claim 1 wherein said tool compressing a rolling element
or a positioning member.
4. The apparatus of claim 2 wherein said tool comprises an extension
adapted to extend into said recessed region, a partial insertion of said extension therein
initially urges said locking member into said housing, whereafter a complete insertion of
the extension allows said locking member to extend into said seat and secure the tool
therein.
5. The apparatus of claim 4 wherein said locking member is a ball.

6. The apparatus of claim 5 comprising a circumferential groove on said extension, said groove adapted to engage with said ball when extended into said seat thereby securing the tool therein.

7. The apparatus of claim 1 comprising a threaded passage in said housing that threadedly receives said detent.

8. The apparatus of claim 1 comprising:
a plurality of seats in said housing;
a plurality of tools supported in said seats; and
a plurality of detents, each engageable with one of said plurality of tools to secure the same in said housing.

9. The apparatus of claim 8 wherein each said detent comprises:
a pin having first and second ends and a channel extending axially within from one end, said first end comprises a shaped recess for receipt of a tool;
a spring member positioned in said channel; and
a ball reciprocable in said channel, said ball biased by said spring toward said second end and partially extensible past the same for engagement with a substantially complementary portion of one of said tools.

10. The apparatus of claim 7 wherein said pin is externally threaded.

11. An apparatus for deep rolling of an elongate work piece comprising:
a housing having a recessed region defining a seat;
a tool engageable in said seat, said tool comprising a rolling element;
a first locking member mounted in said housing and reciprocable between
a retracted position and an extended position at which said member extends into said
recessed region;

whereupon placing said tool in said seat engages said member with said
tool, removably securing the same in said housing.

12. The apparatus of claim 11 comprising biasing means for biasing said
locking member toward its extended position.

13. The apparatus of claim 12 wherein said biasing means is a helical spring.

14. The apparatus of claim 11 wherein said first locking member comprises a
pin slidable in said housing.

15. The apparatus of claim 11 wherein said recessed region is substantially
complementary with said tool and adapted to support the same.

16. The apparatus of claim 11 further comprising:

a positioning member having a body and a head adapted to engage with a workpiece supported in part by said tool; and

a second locking member in said housing adapted to engage with and removably secure said positioning member.

17. A deep rolling apparatus comprising:
- an upper tool comprising a rolling element for engagement with a work piece;
 - a lower tool housing defining at least one seat;
 - a lower tool positionable in said seat, said lower tool comprising a rolling element;
 - a detent comprising a member moveable between a first position at which it locks said tool in said seat and a second position at which said tool is removable from said seat.

18. The apparatus of claim 17 wherein said detent is mounted in said housing and extensible into engagement with said tool.

19. The apparatus of claim 17 wherein said detent comprises a member mounted to said tool and extensible into said housing.

20. The apparatus of claim 17 wherein said detent comprises a spring-biased ball.